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## PATENT ABSTRACTS OF JAPAN

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**H01L 21/3205****H01L 21/56****H01L 21/60****H01L 23/12**(21) Application number: **10272953**(71) Applicant: **NEC CORP**(22) Date of filing: **28.09.98**(72) Inventor: **INABA TAKEHITO****(54) SEMICONDUCTOR DEVICE AND ITS  
MANUFACTURE****(57) Abstract:**

**PROBLEM TO BE SOLVED:** To improve productivity and to reduce the cost of a package material by providing a chip where a plurality of electronic parts are formed on one plane and a plurality of solder balls which connect the respective electronic parts to the outer part of a device, and forming a wiring part connecting the respective electronic components and the respective solder balls with conduction paste.

**SOLUTION:** Innumerable electronic components are formed on one plane 2a of the chip 2 of a semiconductor device 10, and a plurality of pads 21 connecting the respective electronic components with a wiring part 4 are formed. Metal bumps 22 constituted of ball bonding formed of gold and solder are installed on one face 2a of the respective pads. The wiring part 4 is formed of the wirings 41 of conduction paste, which are patterned by screen printing on one plane 2a of the chip 2, and it is extended from the center of the chip 2 to

the vicinity of an end part and is connected to the pads 21 via the metal bump 22. Since the wiring part 4 is formed of conduction paste, the cost of a package material can be reduced.

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